

218249US0DIV

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :

TADASHI KATAFUCHI ET AL :

SERIAL NO.: NEW APPLICATION :

FILED: HEREWITH :

FOR: SUCCINIMIDE COMPOUND PROCESS
FOR PRODUCING THE SAME,
LUBRICATING OIL ADDITIVE, AND
LUBRICATING OIL COMPOSITION
FOR INTERNAL COMBUSTION
ENGINE

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Prior to examination on the merits, please amend the above-identified application as follows:

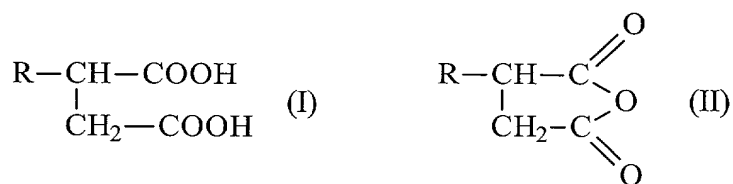
IN THE CLAIMS

Please cancel Claims 1-5.

Please add new Claims 6-9 as follows:

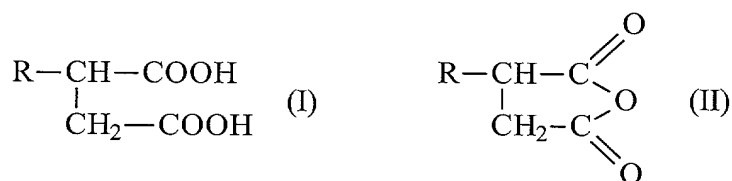
6. (New) A method of promoting acid-neutralization in a cylinder oil for engines of ships, wherein sulfur in said cylinder oil forms SO_x in exhaust gas from said engines, which SO_x reacts with water in said exhaust gas to form sulfuric acid, said method comprising adding to the cylinder oil, as an acid-neutralizing promoter, a succinimide compound obtainable by reacting a polyamine having a carbon/nitrogen weight ratio of from 0.85 to

1.25 with a succinic acid compound of the following general formula (I) or (II) in a molar ratio to the polyamine of up to 1.40:



wherein R represents an alkenyl or alkyl group derived from an olefinic polymer having a carbon number of from 2 to 15 and having a number-average molecular weight of from 200 to 4,000.

7. (New) A method comprising lubricating a ship engine with a cylinder oil containing an acid-neutralizing promoter made of a succinimide compound obtainable by reacting a polyamine having a carbon/nitrogen weight ratio of from 0.85 to 1.25 with a succinic acid compound of the following general formula (I) or (II) in a molar ratio to the polyamine of up to 1.40:



wherein R represents an alkenyl or alkyl group derived from an olefinic polymer having a carbon number of from 2 to 15 and having a number-average molecular weight of from 200 to 4,000.

8. (New) The method of claim 7, wherein the cylinder oil comprises a lube base oil, (a) at least one compound selected from the group consisting of overbased sulfonates, phenates and salicylates of alkaline earth metals, and (b) said acid-neutralizing promoter, and which has a total base number of from 30 to 150 mg-KOH/g.

9. (New) The method of claim 8, wherein the component (a) accounts for from 5 to 40 % by weight and the component (b) for from 0.1 to 3 % by weight based on the total weight of the composition.

DISCUSSION OF THE AMENDMENT

Claims 1-5 have been cancelled.

New Claims 6-9 have been added drawn to a method of promoting acid-neutralization of a cylinder oil (Claim 6) and to a method of lubricating using the above-discussed acid-neutralizing promoter (Claims 7-9). These claims are identical to the claims presented in the amendment filed July 20, 2001 in the parent application, held by the Examiner as drawn to a non-elected invention in the Office Action dated October 9, 2001.

No new matter has been added by the above amendment. Claims 6-9 are now active in the application.

REMARKS

The application is ripe for examination on the merits. An early examination is respectfully solicited.

Respectfully submitted,

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Marked-Up Copy Serial No: <u>4: New App</u> Amendment Filed on: <u>Herewith</u>

Claims 1-5 (Cancelled)

Claims 6-9 (New)

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